



U.S. DEPARTMENT OF
ENERGY

EM's Journey to Excellence WM Symposia 2011

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U.S. Department of Energy

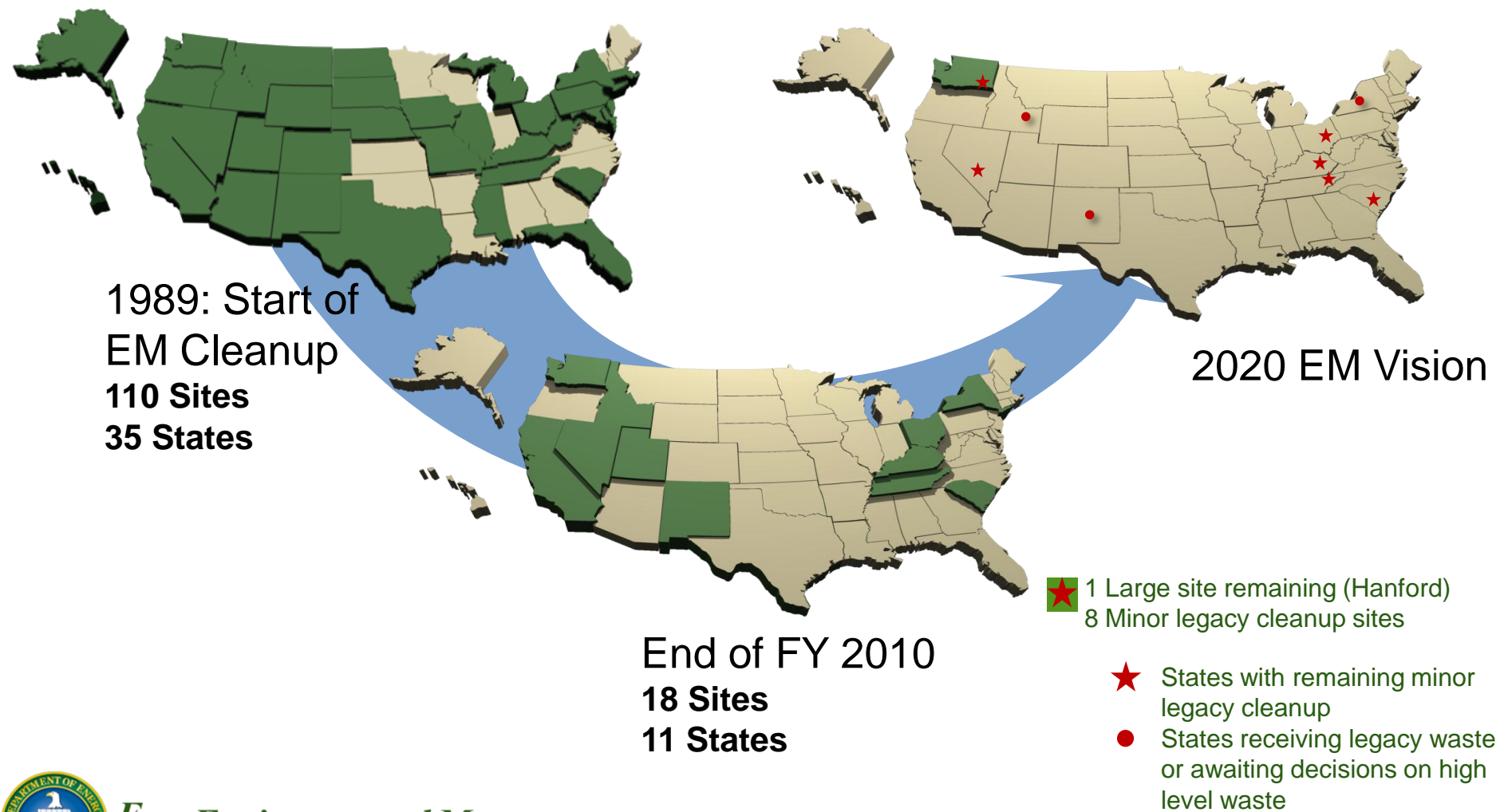


EM *Environmental Management*

safety ♦ performance ♦ cleanup ♦ closure

www.em.doe.gov

We have a clear vision of the future . . .



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We are turning our liabilities into assets . . .

- Safe, Secure, and Compliant
- Tank Waste
- Spent (used) Nuclear Fuel
- Special Nuclear Material
- High Priority Groundwater Remediation
- Transuranic and Mixed/Low-Level Waste
- Soil and Groundwater Remediation
- Deactivation and Decommissioning (D&D)



• Program Direction, Program Support, Community & Regulatory Support, Technology Development & Deployment, and Post-Closure Administration

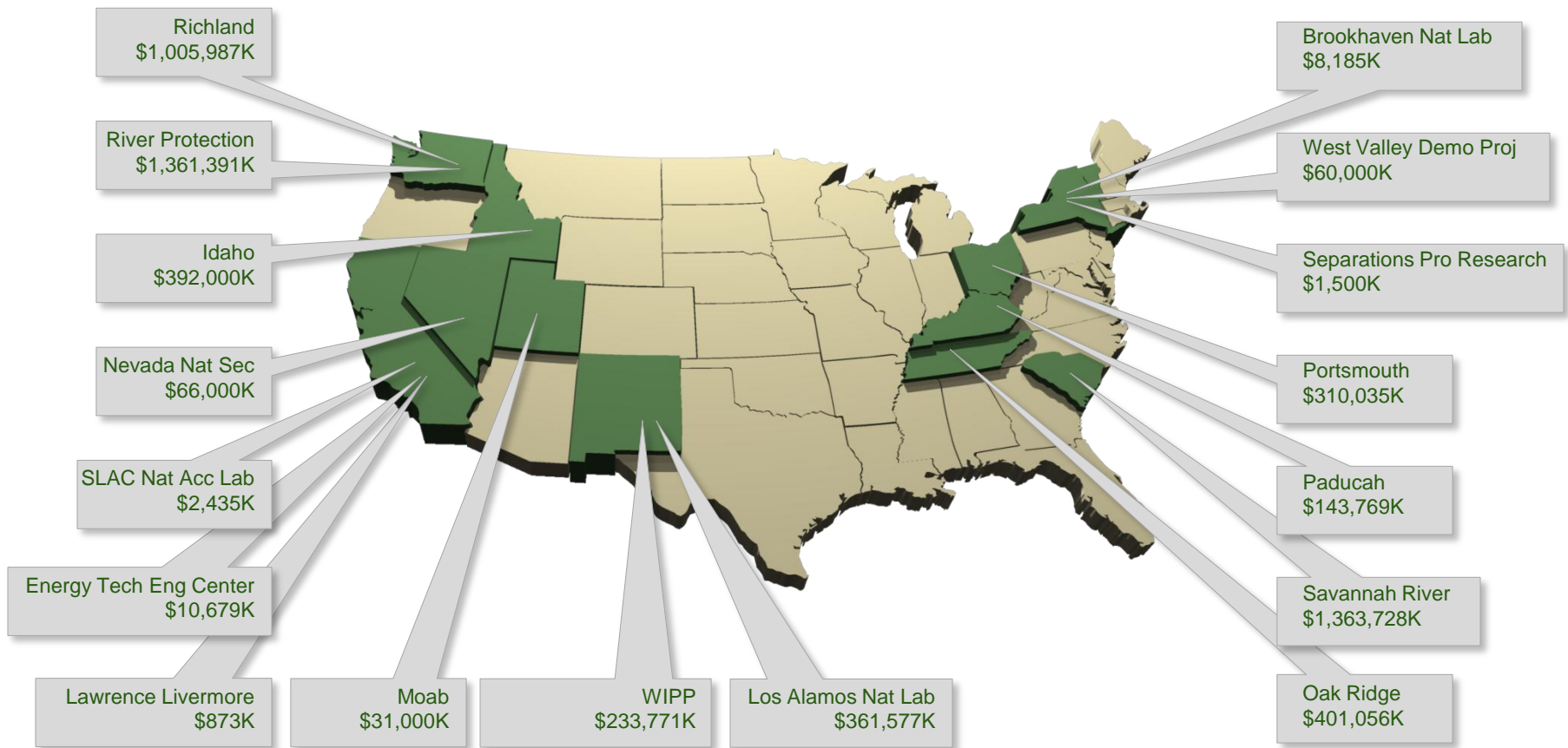


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EM's 2012 budget request maintains compliance . . .



To achieve our 2020 vision, we will . . .

Build on the ARRA momentum

➤ **Complete the three major tank waste construction projects:**

- Sodium Bearing Waste Facility by 2012
- Salt Waste Processing Facility by 2014
- Waste Treatment Plant by 2019



➤ **Disposition 90% of legacy TRU waste by 2015**

➤ **Shrink the EM legacy footprint 90% by 2015**

➤ **Reduce life-cycle costs by up to \$36B**



... complete the three major tank waste construction projects by 2019 ...

Sodium Bearing Waste Facility

Construction complete 2011 (operational 2012)



Salt Waste Processing Facility

Construction complete 2014 (operational 2014)



Waste Treatment Plant

Construction complete 2016 (operational 2019)



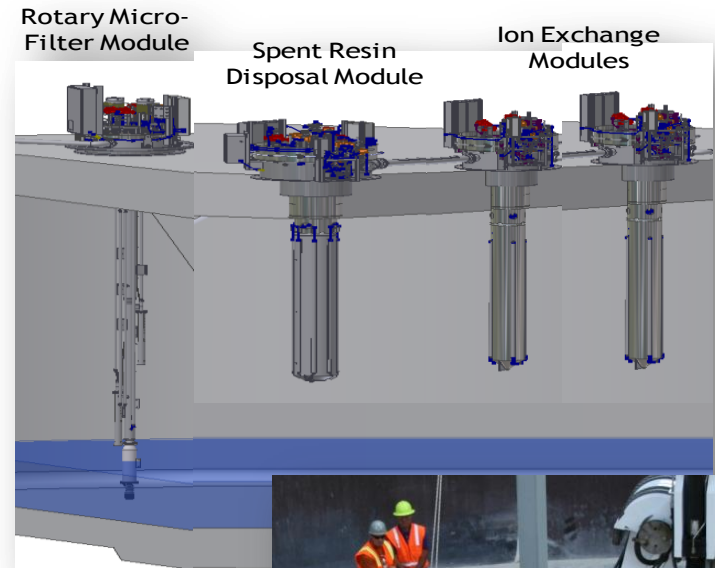
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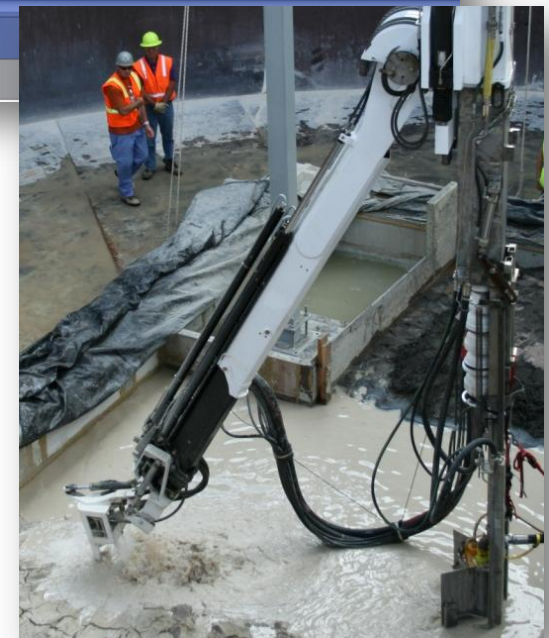
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... reduce lifecycle costs ...

- **\$7B lifecycle cost savings and avoidance** via ARRA
- **Accelerate tank waste schedule 6 years at SRS and 7 years at Hanford**; reducing EM's environmental liability and LCC by \$3B at SRS and \$16B at Hanford



Fluidized Bed Steam Reformer



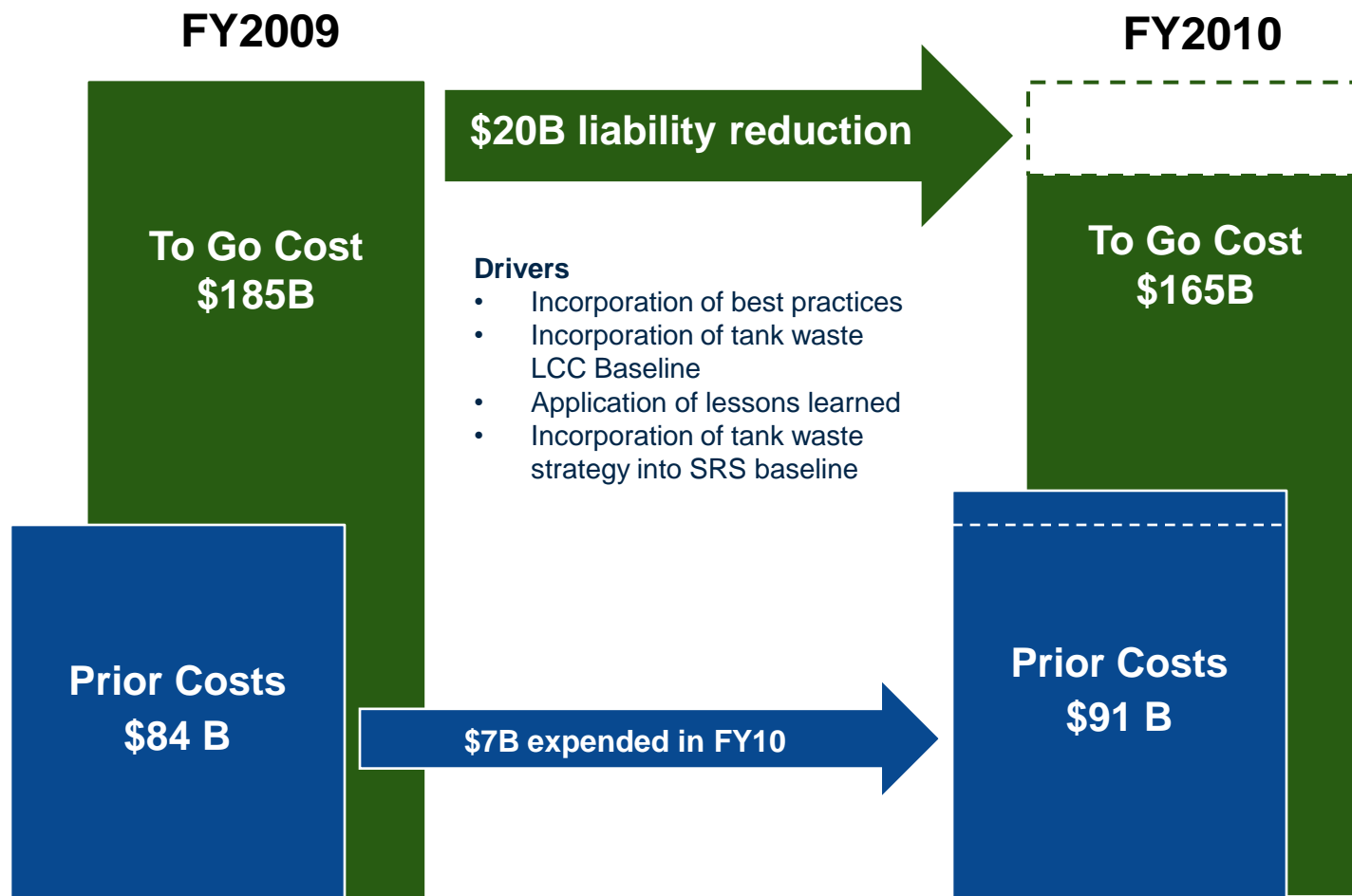
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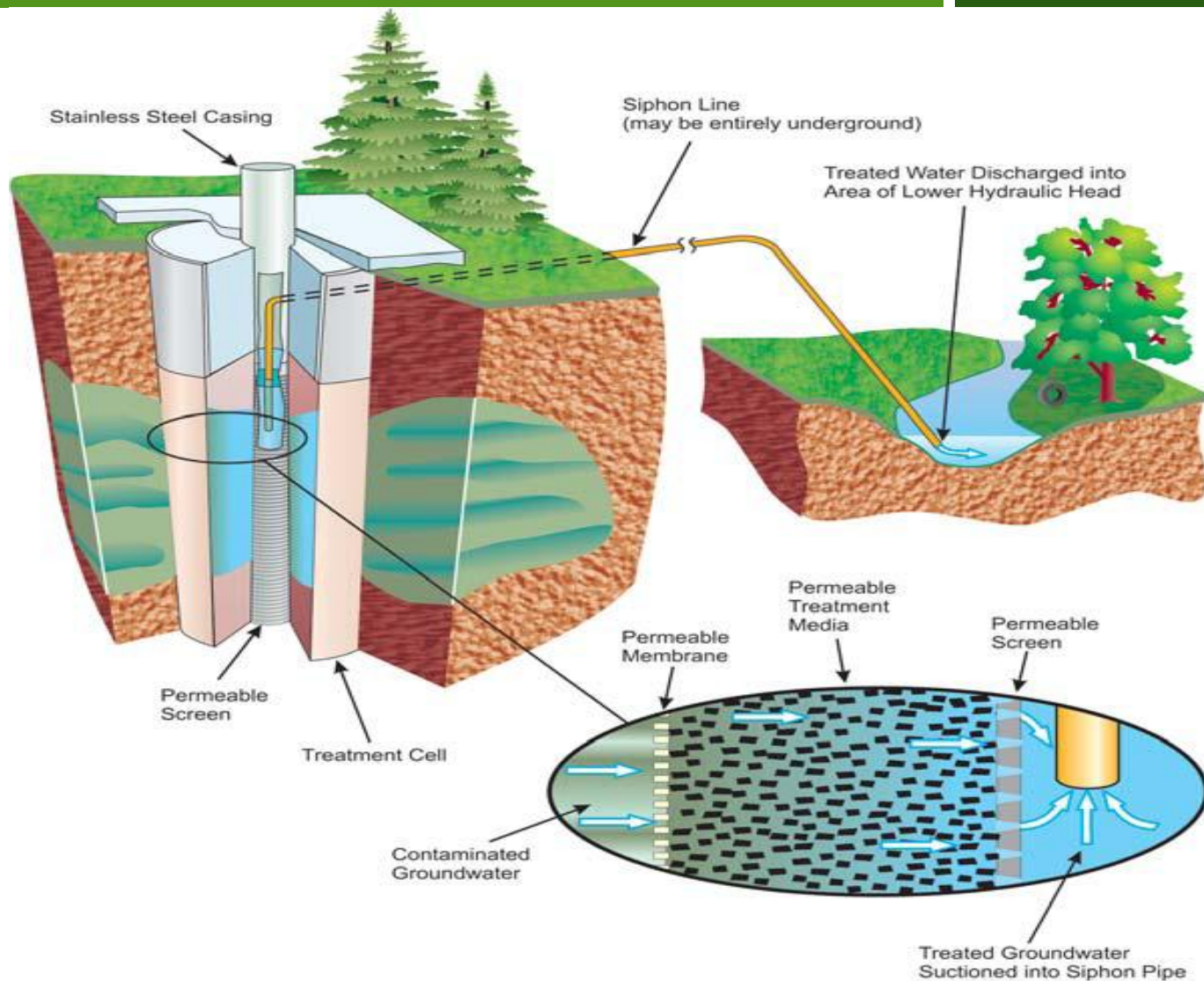
. . . and environmental liability . . .

Environmental Liability



... through innovation ...

- \$10B life-cycle cost reduction via high-priority groundwater remediation



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... disposition 90% of
TRU waste by 2015 ...



- All Legacy TRU waste to WIPP by 2020, except for Hanford
- 65% Legacy TRU disposed to date; 90% by 2015

Completed TRU Sites

- ✓ AREVA
- ✓ Lawrence Livermore National Laboratory
- ✓ Lawrence Livermore National Laboratory - Site 300
- ✓ GE Vallecitos Nuclear Center
- ✓ Energy Technology Engineering Center
- ✓ Nevada Test Site
- ✓ Rocky Flats Environmental Technology Site
- ✓ Lovelace Respiratory Research Institute
- ✓ Mound
- ✓ Fernald
- ✓ KAPL Nuclear Fuel Services
- ✓ Brookhaven National Laboratory
- ✓ Teledyne-Brown
- ✓ ARCO
- ✓ US Army Materiel Command
- ✓ University of Missouri Research Reactor
- ✓ Battelle Columbus Laboratories



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. . . at the Waste Isolation Pilot Plant . . .

90% of legacy TRU waste dispositioned by 2015



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... and shrink the EM legacy footprint ...

Shrink the EM legacy footprint 90% by 2015

- In 1989, legacy cleanup footprint was 3,125 sq miles
- By 2015, it will be reduced to 93 sq. miles
- 2,636 facilities completed
- 7,745 remediations completed

Hanford – 585 to 10 square miles

Savannah River - 310 to 16 square miles



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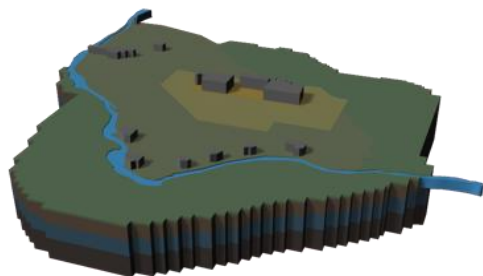
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... at Hanford ...

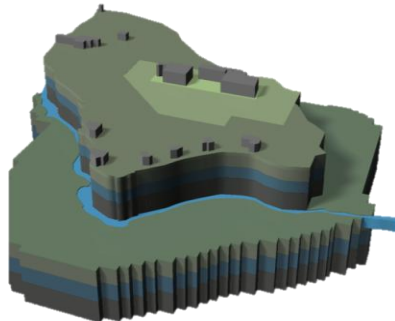
HANFORD

1989



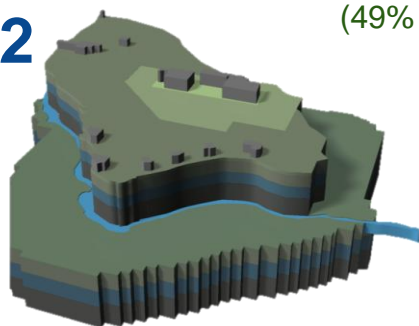
~ 585 square miles

2011



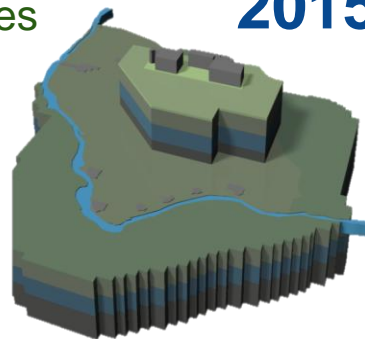
~ 295 square miles
(49% reduction)

2012



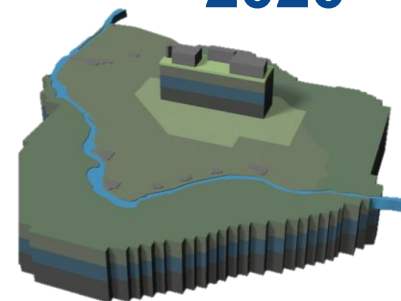
~ 187 square miles
(68% reduction)

2015



~ 75 square miles
(87% reduction)

2020



~ 10 Square miles
(98% reduction)



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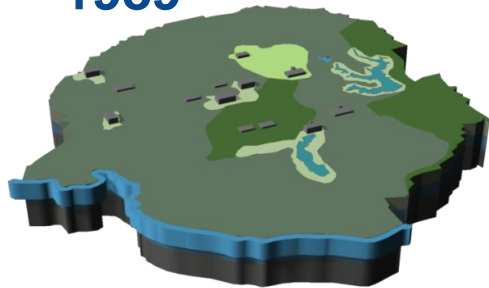
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... and at Savannah River Site ...

SAVANNAH RIVER

1989



~ 310 Square miles

2011



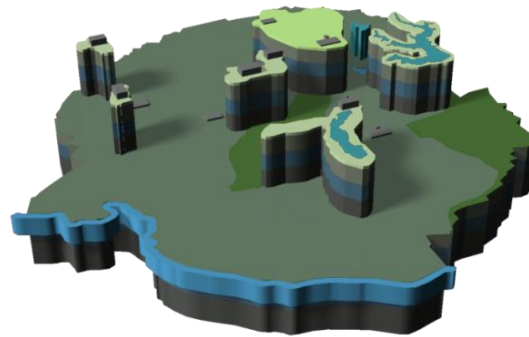
~ 102 Square miles
(67% reduction)

2012



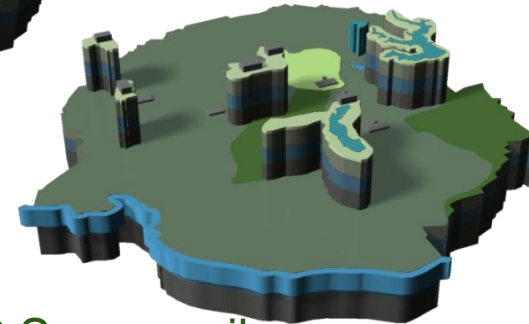
~ 77.5 Square miles
(75% reduction)

2015



~ 31 Square miles
(90% reduction)

2020



~ 16 Square miles
(95% reduction)

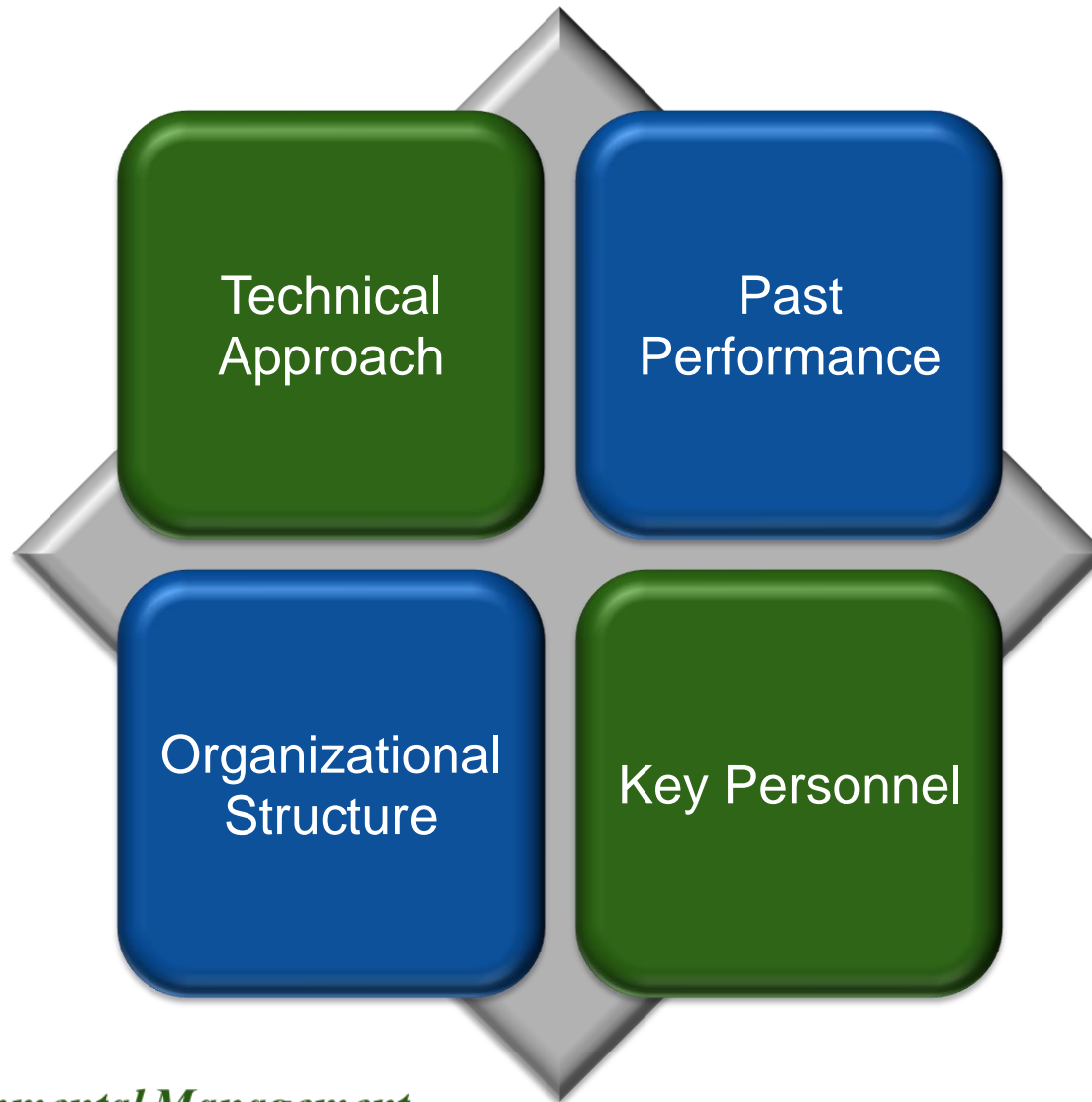


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We will choose excellence . . .



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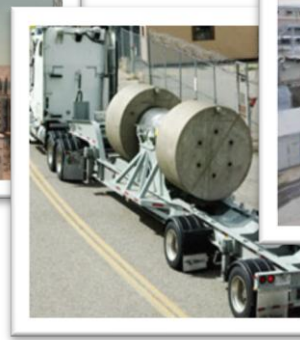
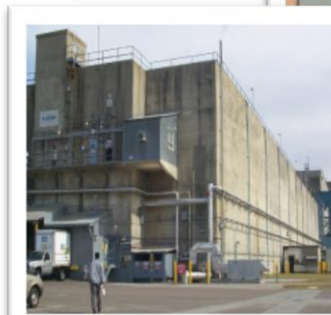
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. . . build on our Recovery Act success . . .

- ARRA demonstrated value; \$7B in future savings and cost avoidance
- 11,183* jobs created/saved with ARRA funds
- \$1.8B in Recovery Act funds awarded to small business
- \$1.7B in Base funding awarded to small business in FY10

**September 30, 2010*

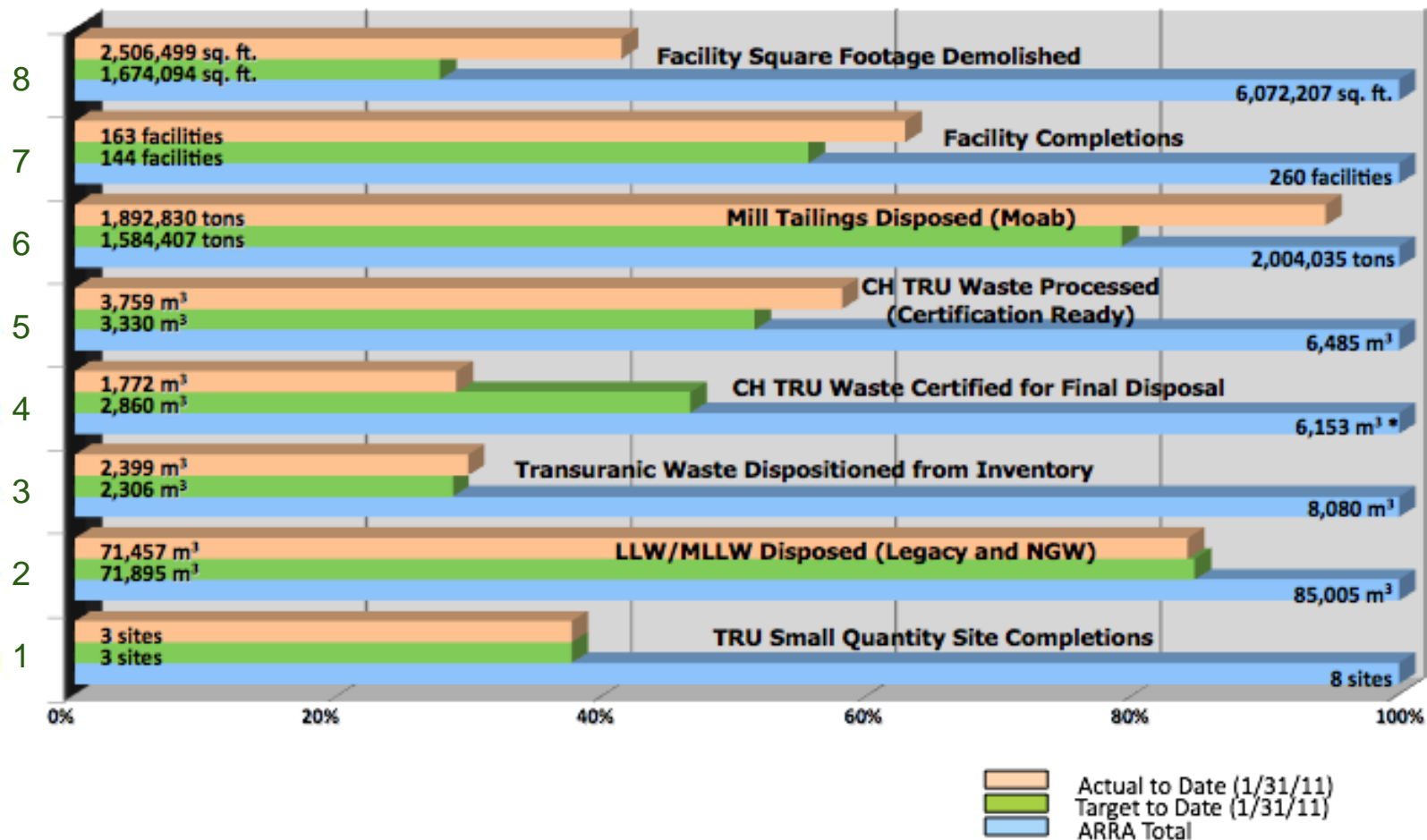


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... continue high performance ...



. . . and improve contract and project management . . .

GAO Report Card

EM has made substantial progress in addressing GAO report
on contract management



Demonstrating strong commitment and top leadership support

GAO Confirmed



Demonstrating progress in implementing corrective measures

GAO Confirmed



Developing a corrective action plan that identifies corrective solutions

GAO Confirmed



Commit sufficient people and resources to resolve contract management problems

Continue to make progress



Monitor and independently validate the effectiveness and sustainability of corrective measures

Continue to make progress



EM 2020 Cleanup Vision

Results and Benefits

Start of EM
Cleanup

- From 110 sites down to 1 major site – Hanford
- All tank waste treatment systems constructed and operating
- \$36B reduction/avoidance in lifecycle cost via investments

2020 EM Vision

- Protecting human, health and the environment
- Sites available for future missions, economic development and job creation
- Reducing one of our nation's largest liabilities and the burden on future generations

Current Status



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